
Orchidaceae Dunstervillorum V: Two New Species and a New Combination in *Epidendrum* from the Venezuelan Guayana

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ABSTRACT. Two new species and a new combination are required for the treatment of *Epidendrum* for the *Flora of the Venezuelan Guayana*. The new species are *Epidendrum caurense* and *Epidendrum nuriense*. *Neolehmannia pabstii* is transferred to *Epidendrum*, with the new name *Epidendrum dichaeoides*. All three species are illustrated with previously unpublished plates by the late G. C. K. Dunsterville. Comments on affinities and geography are provided for all species.

Although several authors (Barros, 1982; Dunsterville & Garay, 1976; Garay, 1977; Pabst, 1978) assign subtribal rank to some groups of the subtribe Laeliinae (members of former subtribes Epidanthinae L. O. Williams, and Stenoglossinae Benth.) that display well-developed viscidia, most modern orchidologists (e.g., Dressler, 1984; Hagsater, 1985) agree that most members of *Epidendrum* sensu lato display variously developed viscidia and that the difference between the proposed subtribes Epidanthinae and Stenoglossinae, and the Laeliinae is one of degree. There is a consensus in including most members of the Epidanthinae and Stenoglossinae, genera such as *Epidanthus* L. O. Williams, *Amblostoma* Scheidw., *Nanodes* Lindley, *Neolehmannia* Kränzlin, *Stenoglossum* Kunth, and *Kalopternix* Garay & Dunsterv., in the genus *Epidendrum* itself. Each of these segregate genera is apparently closer to a different group within the genus *Epidendrum*, and not to the other members of the Epidanthinae or Stenoglossinae, rendering Dunsterville & Garay's (1976) circumscription of these subtribes artificial. Another genus included in the Stenoglossinae, *Cladobium* Lindley, containing the sole species *C. violaceum* Lindley, clearly belongs in the genus *Scaphyglottis* Poeppig & Endl. because of its vegetative and floral morphology. *Scaphyglottis*, although a member of the Laeliinae, is only distantly related to

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Epidendrum and the other former members of the Stenoglossinae.

The broad circumscription of the genus *Epidendrum* followed in the Orchidaceae treatment for the *Flora of the Venezuelan Guayana* requires the inclusion of the new species *Epidendrum caurense* (belonging to the *Amblostoma* group) and the transfer of *Neolehmannia pabstii* P. Braga to *Epidendrum*.

Epidendrum caurense Carnevali & G. Romero, sp. nov. TYPE: Venezuela. Bolívar: Río Caura, in rainforest close to Las Pavas Falls, where Upper Río Caura separates from the Lower, ca. 300 m, May 1976, collected originally by F. B. Stevens, *Dunsterville & Dunsterville 1354* (holotype, AMES). Figure 1.

Species haec *Epidendro lanipes* Lindley similis sed ramas inflorescentia laxioribus, pubescentia rachidis laxioribus, floribus minoribus pallide flavo-viridis, lobo centrali oblongo non pandurato vel cuneato, carina centrali brevioris discrepat.

Epiphytic herb; rhizome shortly repent, with the pseudobulbs \pm aggregate. Pseudobulbs 30–50 cm long, erect, homoblastic, slenderly fusiform, 3–8-leaved in the upper half. Leaves 15–25 \times 1.5–2 cm, linear-elliptic, acute, subtended by a tubular sheath, midnerve finely sulcate and sharply carinate, blades generally ascending when young, tending to droop when fully grown. Inflorescence terminal, 25–30 cm long, an arcuate panicle with slender, somewhat divaricate, subdensely many-flowered branches; peduncle remotely sheathed, terete, glabrous; rachis with scattered, irregular, moniliform hairs; floral bract ca. 3 \times 2 mm, glabrous, ovate, obtuse. Pedicellate ovary 7.5–8 mm long, densely covered with moniliform hairs. Flowers resupinate or not, light yellowish green, with widely spreading perianth

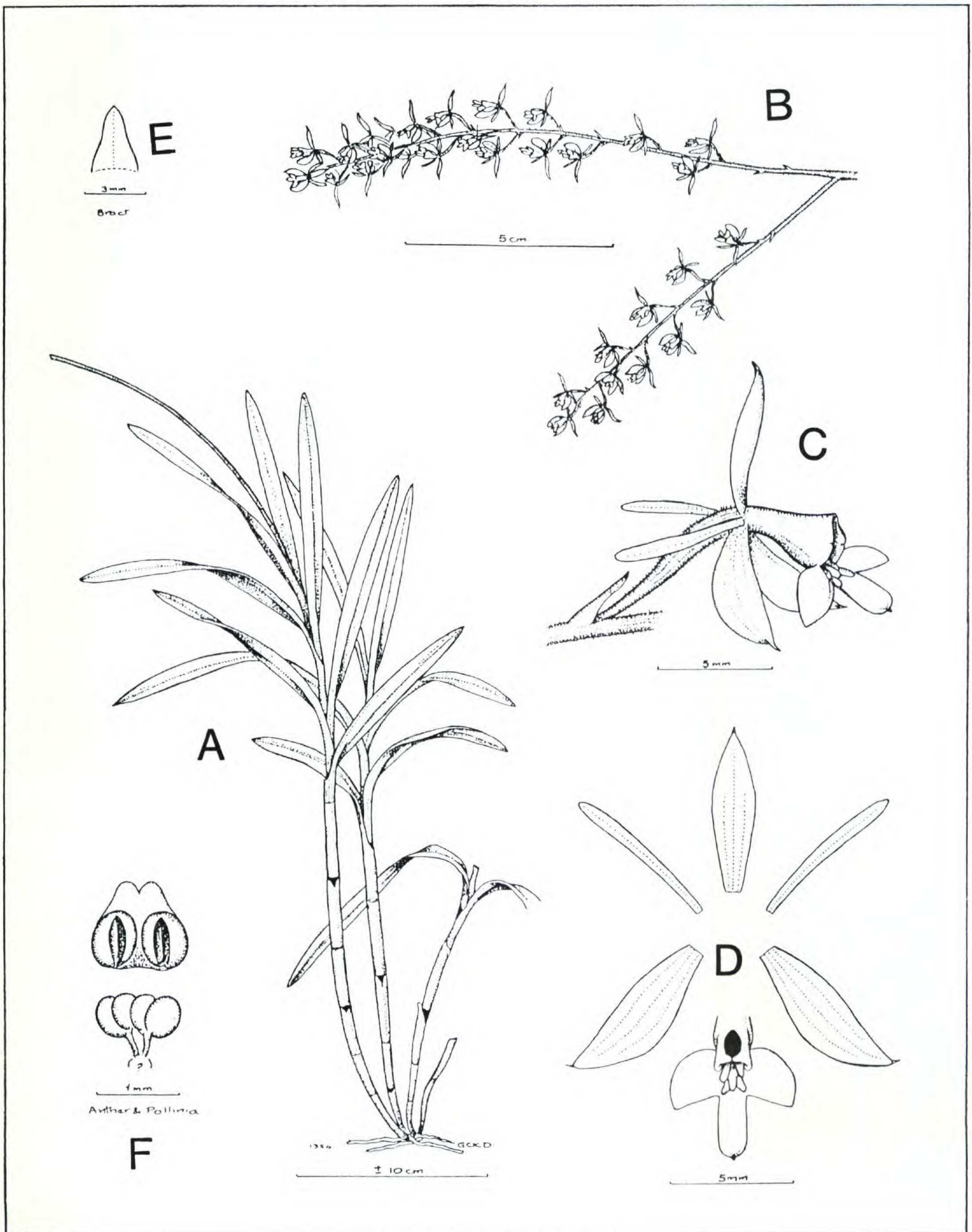


Figure 1. *Epidendrum caurense* Carnevali & G. Romero. —A. Habit. —B. Upper portion of the inflorescence. —C. Flower, lateral view. —D. Floral segments, spread. —E. Floral bract. —F. Anther and pollinia.

segments; sepals ca. 7 mm long, 3-nerved, apex sharply mucronate, dorsal ca. 1.9 mm wide, narrowly elliptic, acute, acuminate, laterals ca. 2.3 mm wide, obliquely elliptic-oblongate, acute; petals slightly shorter than the sepals, ca. 0.6 mm wide,

linear-oblongate, obtuse, 1-nerved, set at variable angles to the column. Labellum fused to column throughout the length of the latter, the free portion ca. 4.5 × 5 mm, sharply 3-lobed; lateral lobes obliquely ovate, ca. 2.5 × ca. 2 mm; central lobe

ca. 2.2 × ca. 1.5 mm, oblong, apex rounded or obtuse, mucronate; disk of the labellum with 2 basal calli and 3 thickened keels, the central keel shorter or subequaling the lateral ones. Column ca. 4.5 mm long, thickened apically; anther ca. 1.2 mm long, consisting of a fairly thin plate bearing 2 separate, thin, bilocular, suborbicular cells; pollinia in 2 slightly asymmetrical pairs, only slightly compressed, each pair on a single caudicle, the caudicles arising from a common point on a viscidium whose form is completely distorted after removal from the split rostellum.

This new species belongs to the *E. amblostomoides* group of *Epidendrum* (E. Hagsater, pers. comm.), which is often included within the former genus *Amblostoma* (or *Amblostoma* group of *Epidendrum*, Dressler, 1984) but is recognized here as distinct. Both groups are characterized by their thickened column, almost spheroid pollinia, and well-developed viscidia. The *Amblostomoides* group is characterized by membranous, mostly pubescent flowers, while in the mostly Brazilian *Amblostoma* group the flowers are glabrous and (especially the labella) very fleshy. All the species of the *Amblostomoides* group have fusiform or cylindrical pseudobulbs, usually paniculate inflorescences with densely flowered, divaricate branches, and a commonly pubescent pedicellate ovary. *Epidendrum caurense* seems closest to *E. lanipes*, from Bolivia, Peru, Ecuador, and Colombia. From this species, *E. caurense* differs by its less dense inflorescence, the less dense pubescence of the pedicellate ovary, its smaller sepals (ca. 7 mm long vs. 10–12 mm long), pale yellow-green flowers (vs. white), the shape of the labellar callus (see below), and its oblong central lobe (vs. cuneate or obovate). The callus of *Epidendrum lanipes* has a central keel and two lateral ones; these lateral calli can be entire or bicallose, thus making the entire callosity 5-keeled. The central keel is always longer than the lateral keels. In *E. caurense* there are always five keels but the lateral keels are longer or subequal to the central keel.

Epidendrum lanipes is known from elevations of 800–1,400 m (Dodson & Bennett, 1990: 64), while *E. caurense* is known only from elevations below 300 m. *Epidendrum purum* Lindley, distributed from Venezuela to Bolivia, is also similar but has white flowers, a glabrous rachis, and pedicellate ovary. Other similar species are *E. amblostomoides* Hoehne, from Goiás, Brazil, and *E. subpurum* Reichb. f. from northern Venezuela. However, both species have a shorter, broader, emarginate central lobe and glabrous rachis and pedicellate ovary.

A specimen from Río Orejas, La Teta, Upper Cauca, Colombia, *Lehmann 6938* (AMES, NY), could represent another population of *Epidendrum caurense*.

Epidendrum dichaeoides Carnevali & G. Romero, nom. nov. Replaced name: *Neolehmannia pabstii* P. Braga, *Bradea* 3: 171. 1981, non *Epidendrum pabstii* A. Hawkes, 1957. TYPE: Brazil. Amazonas: Río Marié, 16 Oct. 1978, *Madison, Braga & Kennedy* (PFF 365) (holotype, INPA-85085). Figure 2.

This species, recently described from Amazonian Brazil, has been collected several times, mainly in the Casiquiare and Río Negro basins in the extreme south of Territorio Federal Amazonas of Venezuela. Here it is locally common, always growing pendent and low on trees in the rather open, low, humid forests that are usually contiguous to “banas.” The plants are frequently purple-tinged or entirely wine-purple. An unusual feature of *Epidendrum dichaeoides* is that it frequently produces upper axillary inflorescences, besides the more normal terminal inflorescences. This character was not mentioned in the original description of *Neolehmannia pabstii*. Vegetatively, *Epidendrum dichaeoides* resembles *Epidendrum prostratum* (Lindley) Cogn. and related species (the former members of the genus *Physinga* Lindley), but it lacks the elongated inflorescence and the basal portion of the labellum does not enfold the lateral margins of the apex of the column. The similarities of *Epidendrum dichaeoides* and *E. prostratum* are more likely to be due to convergence (both occur in the same microhabitats) than to a close phyletic relationship, as *Epidendrum dichaeoides* is probably closer to species like *Epidendrum jejunum* Reichb. f., *E. viridibrunneum* Reichb. f., and *E. williamsii* Dodson, all included in Dunsterville & Garay’s (1976) concept of the genus *Neolehmania*.

The new specific epithet suggests the conspicuous vegetative resemblance of this taxon to plants of the genus *Dichaea* Lindley.

Specimens examined. BRAZIL. AMAZONAS: Río Negro, caatinga at Porto Camanus, 19 Oct. 1978, *Madison et al. 6438* (SEL); Río Curicuriarí, ca. 10 km above the mouth, 25 Oct. 1978, *Madison et al. 6648* (SEL). VENEZUELA. TERRITORIO FEDERAL AMAZONAS: Departamento Atabapo, Caño Yagua, E del Cerro Yapacana, 3°3’N, 66°40’W, *F. Guánchez 1050* (TFAV); Departamento Casiquiare, Capihuara, *Ll. Williams 15570* (VEN); Departamento Río Negro, IVIC Study Area, 4 km NE of San Carlos de Río Negro, ca. 20 km SE of confluence of Río Negro and Brazo Casiquiare, 1°56’N, 67°03’W, 120 m, 10 Nov. 1977, *R. Liesner 3280* (MO, SEL, VEN).

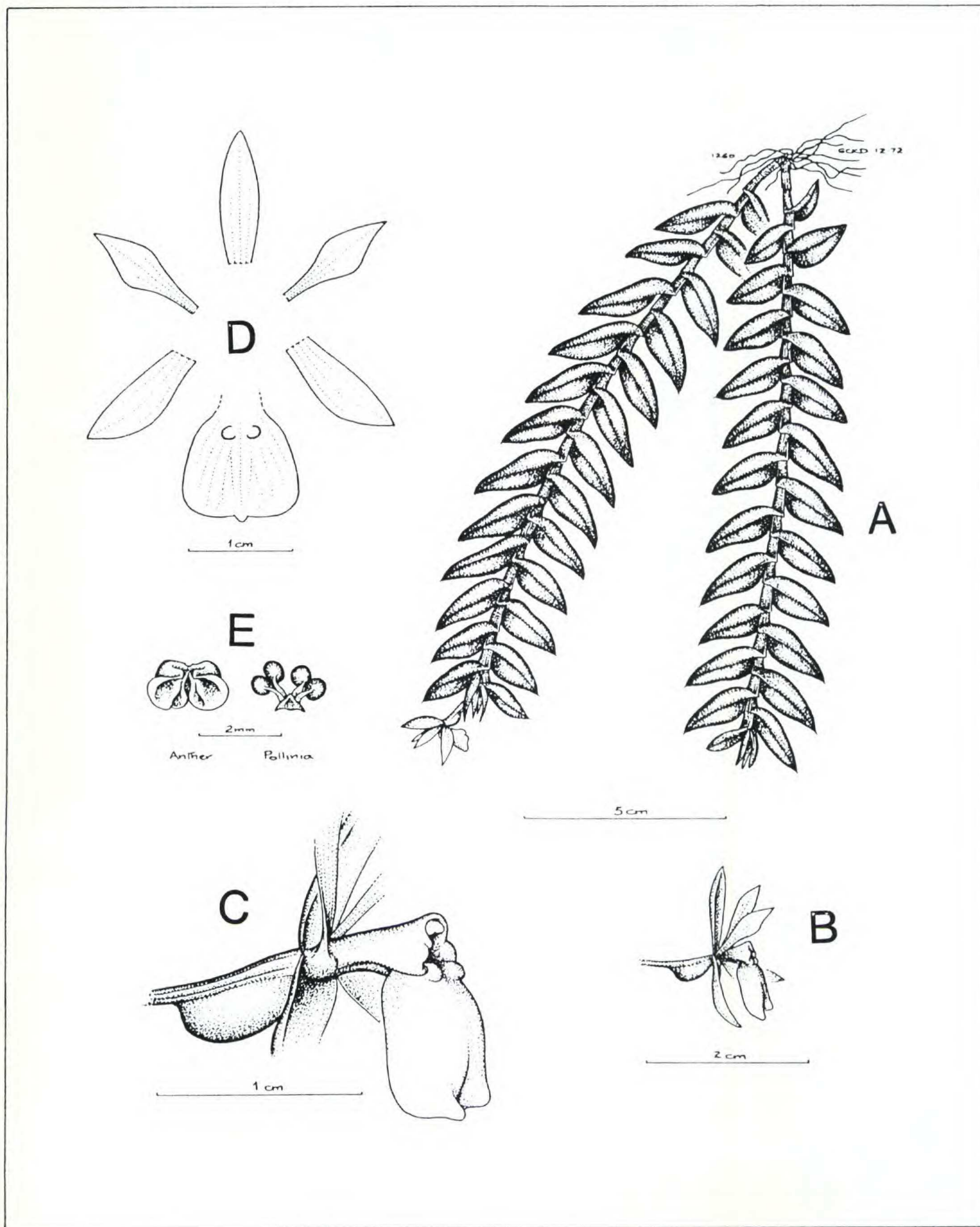


Figure 2. *Epidendrum dichaeoides* Carnevali & G. Romero. —A. Habit. —B. Flower, lateral view. —C. Detail of column, labellum, and vesicle. —D. Floral segments, spread. —E. Anther and pollinia.

9 Apr. 1979, *R. Liesner* 6424 (MO, VEN), 11 Nov. 1987, *R. Liesner & G. Carnevali* 22981 (MO, VEN), 5 Sep. 1988, *G. Carnevali & I. Ramírez* 2763 (VEN), Mar.–Apr. 1981, *F. Delascio et al.* 9483 (VEN), 17 Sep. 1975, *P. Berry* 1361 (SEL, VEN); Río Ararí, 1°30'N, 65°13'W, 530–550 m, Nov. 1983, *F. Guánchez* 2220,

(TFAV, VEN); Cerro La Neblina, Río Mawarinuma, 140 m, 15–18 Mar. 1984, *R. Liesner* 16559 (MO, VEN), *W. Anderson* 13362 (MICH, VEN); Río Extremo Sur, cerca de la confluencia con el Río Siapa, 1°50'N, 64°30'W, 520 m, *Dunsterville & E. Dunsterville* 1260 (AMES, VEN).

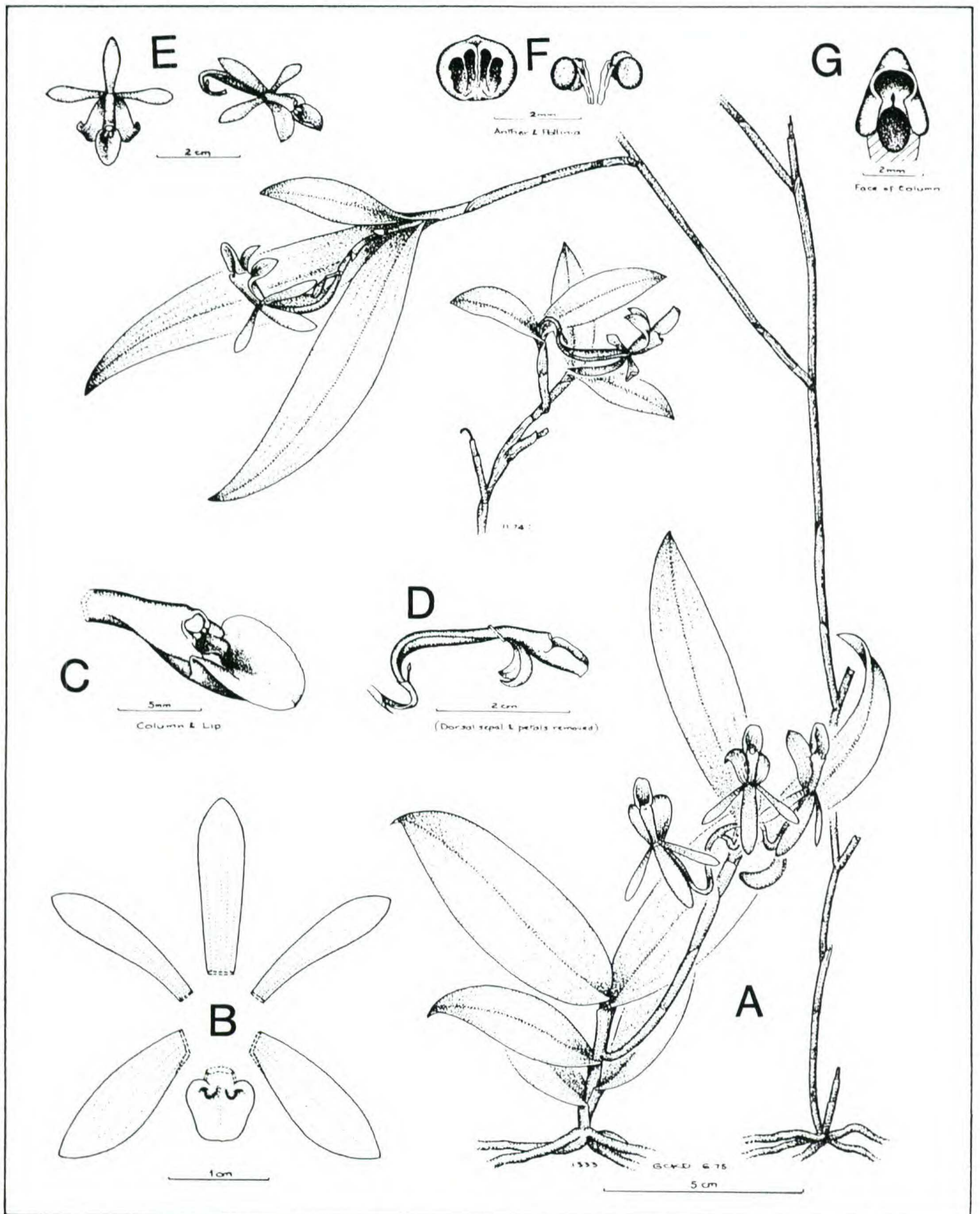


Figure 3. *Epidendrum nuriense* Carnevali & Hags. —A. Habit. —B. Floral segments, spread. —C. Column and labellum. —D. Lateral view of flower, dorsal sepal and petals removed. —E. Flower. —F. Anther and pollinia. —G. Column, ventral view.

Epidendrum nuriense Carnevali & Hags., sp. nov. TYPE: Venezuela. Bolívar: Altiplanicie de Nuria, apparently common in cloud forest at 600–700 m, *Dunsterville & E. Dunsterville* 1333 (holotype, VEN; isotype, line drawing, AMES). Figure 3.

Herba epiphytica. Caules ex internodiis medianis producti, apice 2–3(–5) foliati. Flores 1–4, terminales, non resupinati. Ovarium incrassatum, basi incurvum. Sepala 5-nervata, lateralia basi columnae breviter connata. Petala 5-nervata, oblanceolata. Labellum 6–7 × 5–7 mm, ovatum vel ovato-ellipticum, basi cordatum, apice truncatum, disco pulvinato-bicalloso. *Epidendro lechleri* Reichb. f.

similis sed labello angustiore, inflorescentia laxiore pauciflora, planta floresque majore recedit.

Epiphytic herb, 7–40 cm high, with sympodial erect growth, branched. Roots produced only from the base of the basal stems, fleshy, thin, ca. 2.5 mm diam. Stems reedlike, cylindric, straight, produced from medial internodes of older stems, sympodial elements 2–15 cm long; concealed in gray, nervose, tubular sheaths to 5 cm long. Leaves 4–10 × 1.8–2.2(–3) cm, 2–3(–5) per stem, grouped toward stem apex, narrowly elliptic or rarely ovate, acute, margin entire, blades articulate with their laterally compressed, striate sheaths. Inflorescence terminal from the apex of fully mature stems, spathe absent, racemose or rarely branched, somewhat nutant; peduncle 1.5–3 cm long, laterally compressed, peduncle bracts 1 or 2, ca. 2 mm long, triangular; rachis fractiflex, laterally compressed. Flowers not resupinate, 1–3(–4) in the raceme, opening simultaneously; sepals and petals bronze-green, nerves somewhat darker; labellum shiny, bronze-colored with green calli; column green, apically pink; anther cream-color. Floral bracts ca. 2 mm long, amplexicaul, triangular. Pedicellate ovary 1.8–2.5 cm long, longitudinally swollen ventrally, terete, smooth, basally incurved. Sepals 5-nerved, fleshy, rugulose without, dorsal keel poorly developed; dorsal sepal 17–18 × 4 mm, reflexed over ovary, narrowly obovate, apex obtuse, margins not revolute; lateral sepals 17–18 × 5–6 mm, partially fused with column at base, then reflexed, elliptic to obovate-elliptic, apex subacute to acute, slightly falcate, margins revolute; petals 17 × 4 mm, 5-nerved, less fleshy than sepals, spreading or reflexed, narrowly obovate-elliptic, apex obtuse, slightly falcate, margins extended or somewhat revolute. Labellum fused to column throughout the length of the latter, fleshy, blade 6–7 × 5–7 mm, ovate to ovate-elliptic, basally cordate, apically truncate, margins finely erose, basally provided with 2 small, pulvinate calli, without keels, marginally thinner than the rest of the blade. Column ca. 10 mm long, slightly bent toward base, clinandrium very small, entire; rostellum near column-apex, slitlike; lateral lobes of column convex-truncate. Nectary very deep. Anther ovoid, without ornamentation, 4-locular. Pollinia 4, subglobose, somewhat compressed, subequal, caudiculae slightly longer than pollinia, viscidium semi-liquid. Capsule unknown.

This species belongs to the *Epidendrum arbuscula* Lindley group, which is characterized by the stems branching around the middle portion and producing roots from the base of the most basal stems; the architecture of the plant is thus termed “sym-

podial erect growth” (Hagsater, 1987). *Epidendrum nuriense* does not have close allies in the Guayana Shield. The only other species in the area with a similar branching pattern is *Epidendrum lechleri* Reichb. f. This species, however, has denser inflorescences, smaller flowers, and a proportionally much broader labellum. *Epidendrum megastrium* Lindley, from Andean Peru and Ecuador, resembles *E. nuriense* because of its habit and longitudinally swollen ovary, but the Andean species comes from much higher elevations (2,500–2,700 m), has denser inflorescences, and an acuminate or acute labellum. *Epidendrum macrogastrium* Kränzlín from Peru is possibly related to *E. nuriense* but comes from higher elevations in the Andes (2,700–2,900 m), has smaller flowers, and a differently shaped (very broadly cordate), much broader labellum.

Epidendrum nuriense seems to be restricted to the eastern portion of Estado Bolívar, Venezuela, where it is apparently common in the Altiplanicie de Nuria, and more scarce in La Escalera, where the senior author and Carlos García Esquivel collected living material that is currently under cultivation.

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